

Work Order ID 119369

119369

Page 1

Thursday, May 15, 2014 3:45:48 PM

647.9412
B119369

Item ID: 647.9412

Revision ID:

Item Name: Deflector Upper, Half

Start Date: 5/15/14

Start Qty: 4.00

4

Required Date: 5/15/14

Req'd Qty: 4.00

4

Reference:

Approvals:

Process Plan: MLJ

Date: 14-05-21

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run

Start

NR1

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

647.9400

B

110

0.00

110

HAAS 1

HAAS CNC vertical machine #1

HAAS CNC VERTICAL MACHINING #1

Memo

Billet size: 3.00" X 4.500" X 34.000"

1-Machine per folio FB184

DWG REV: B

FOLIO REV: AA

2- deburr and break all sharp edges

0.00

OK 14/06/09

4 B
OK 14/06/09

120

120

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

OK 14/06/09

4 B

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 119369

Thursday, May 15, 2014 3:45:48 PM

119369

Page 2

Item ID: 647.9412 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Deflector Upper, Half
 Start Date: 5/15/14 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 5/15/14 Req'd Qty: 4.00 *4* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00				4			SL/4-6-9
130									
QC	Memo	0.00							
Quality Control									
131		0.00							
131									
HandFinish	Memo	0.00							
Hand Finishing	CLEAN AND REMOVE ALL PART MARKING								N/A
140	Outsource process-Anodize per QSI017 4.1.10.1	0.00							
140									
Outsource4	Memo	0.00							
Outsource process - Anodize	Issue P/O to ATG : 24541								CZ 14/06/10 4
	1- Black Anodize as per Dwg 647.9400								
	Certification of Comformity is required								

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>																

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Design <input type="checkbox"/>									
Doc/Data <input type="checkbox"/>									
Equip/Tooling <input type="checkbox"/>									
Handling/Pre <input type="checkbox"/>									
Material <input type="checkbox"/>									
Operator <input type="checkbox"/>									
Offset/Setup <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Transport <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 119369

119369

Page 3

Thursday, May 15, 2014 3:45:48 PM

Item ID: 647,9412 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: Deflector Upper, Half
 Start Date: 5/15/14 Start Qty: 4.00 *4* Cust Item ID:
 Required Date: 5/15/14 Req'd Qty: 4.00 *4* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	Receive & Inspect for Damage & Mat'l Certs	0.00							
150	Packaging	0.00							
Packaging	Memo								
155	QC5- Inspect part completeness to step on W/O	0.00							
155	QC	0.00							
Quality Control	Memo								
180	Identify as per dwg & Stock Location: CA	0.00							
180	Packaging	0.00							
Packaging	Memo								
IDENTIFY AS PER APICAL MPP-120 BY STAMPING P# AND REV									

DAS
28
9-89

JUN 26 2014

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Crosstube <input type="checkbox"/></td> <td style="width:15%;">Water Jet <input type="checkbox"/></td> <td style="width:15%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design <input type="checkbox"/>									
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Equip/Tooling <input type="checkbox"/>									
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Operator <input type="checkbox"/>									
Offset/Setup <input type="checkbox"/>									
Process <input type="checkbox"/>									
Supplier <input type="checkbox"/>									
Training <input type="checkbox"/>									
Transport <input type="checkbox"/>									
Unapproved <input type="checkbox"/>									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Work Order ID 119369***119369***

Page 4

Thursday, May 15, 2014 3:45:48 PM

Item ID: 647.9412

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Deflector Upper, Half

Start Date: 5/15/14 Start Qty: 4.00

4

Cust Item ID:

Required Date: 5/15/14 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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190

QC21- Final Inspection - Work Order Release

0.00

190

QC

Memo

0.00

Quality Control

WLS 14-06-26

MF
14-6-26

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Doc/Data									
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FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
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Picklist Print

Page 1

Thursday, May 15, 2014 3:45:51 PM

Work Order ID: 119369

119369

Parent Item: 647.9412

647 9412

Parent Item Name: Deflector Upper, Half

Start Date: 5/15/14

Required Date: 5/15/14

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP REV:A NEW ISSUE JFS 13/05/24 VERIFY BY: DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B3.000X04.50 0		Purchased	No			110	f	28.0000	2.834	12			

M7075T6B3 000X04 500

7075-T6 BAR 3.000' X 4.500"

**

DAS

02

9-89

ET 14 06 -04

Location

Loc Qty

Loc Code

MAT005

28

m126615

28

8.5 12

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

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Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY

Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric <input type="checkbox"/> Cracks <input type="checkbox"/> Crimp/Kink/Ripple/Wave <input type="checkbox"/> Cuffs <input type="checkbox"/> Crushing <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Marks/Chatter <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube	General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function	<input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence	<input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

APICAL

INDUSTRIES, INC.

ENGINEERING CHANGE NOTICE NO.

04389

SHEET 1 OF 1

DWG NO. 647.9400

REV: A

PREPARED BY J. SOTO

DATE: 01/28/2014

EFFECT ON DWG
☒ INC. ☐ UNINC.

DWG TITLE: DEFLECTORS

APPROVED BY: ENGR *[Signature]*

MFG *[Signature]*

QC *[Signature]*

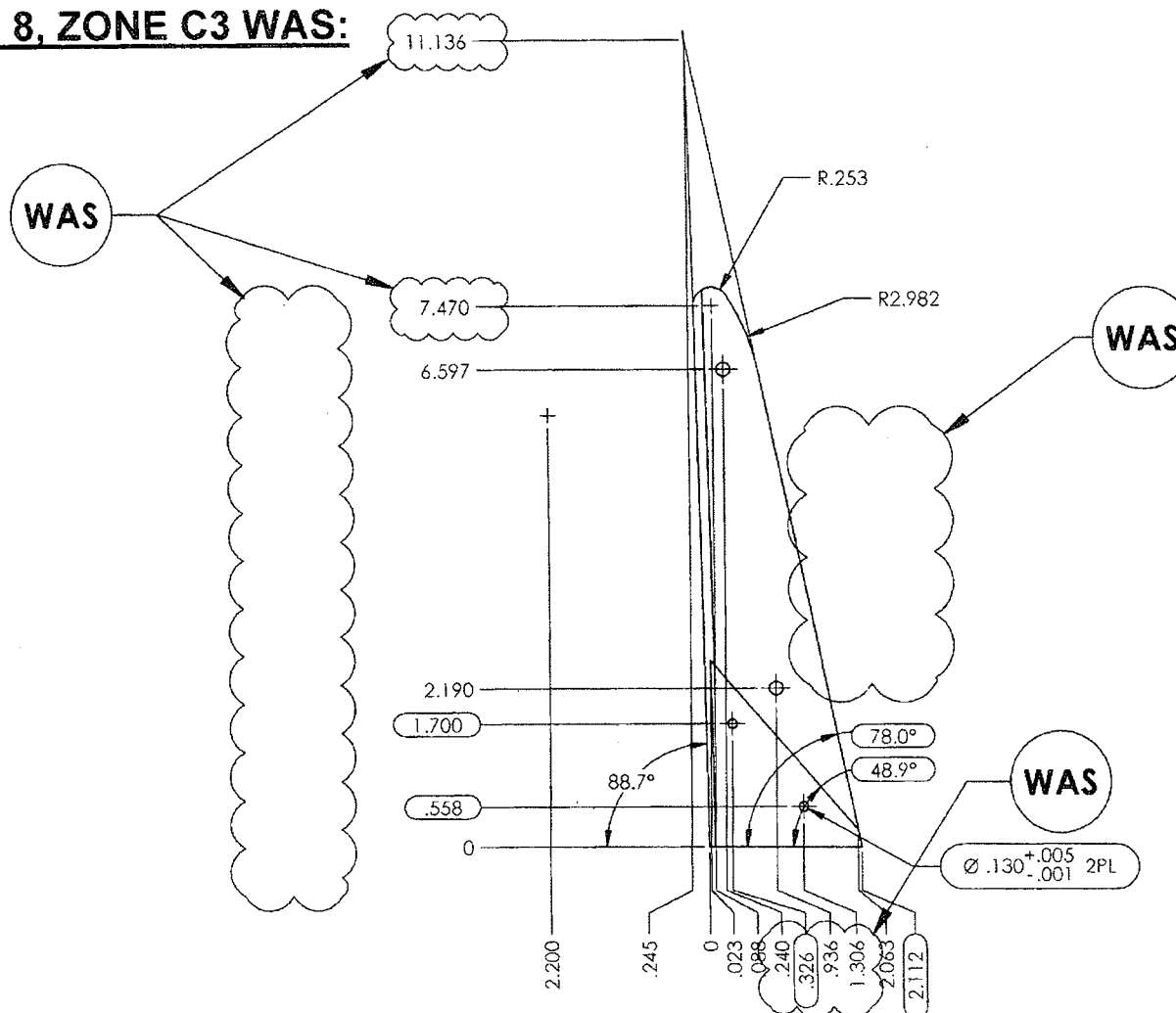
EFF. NEXT ORDER

TRANSACTION CODES (TC):
A-ADD
R-REVISE
C-CREATE
D-DELETE

REASON: REVISED, ADDED, & DELETED INSPECTION DIMENSIONS TO 647.9414.

ECR: D-14-01

SHEET 8, ZONE C3 WAS:



119369 MCL
1405-21

DOCUMENTS EFFECTED:

☐ MDL ☐ INSTALL INSTRUCTIONS ☐ ICA ☐ FMS ☐ BOM

CHANGE CATEGORY

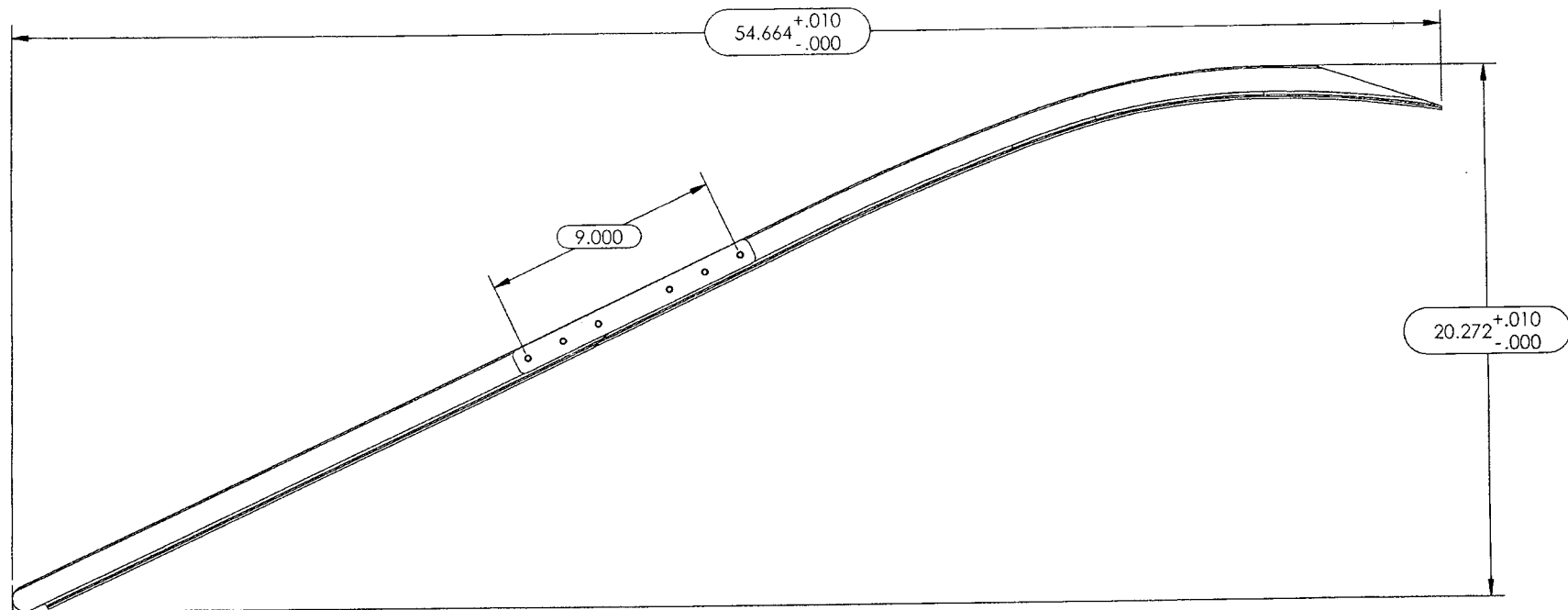
☐ MAJOR ☒ MINOR

DER REVIEW REQUIRED

☐ YES ☒ NO

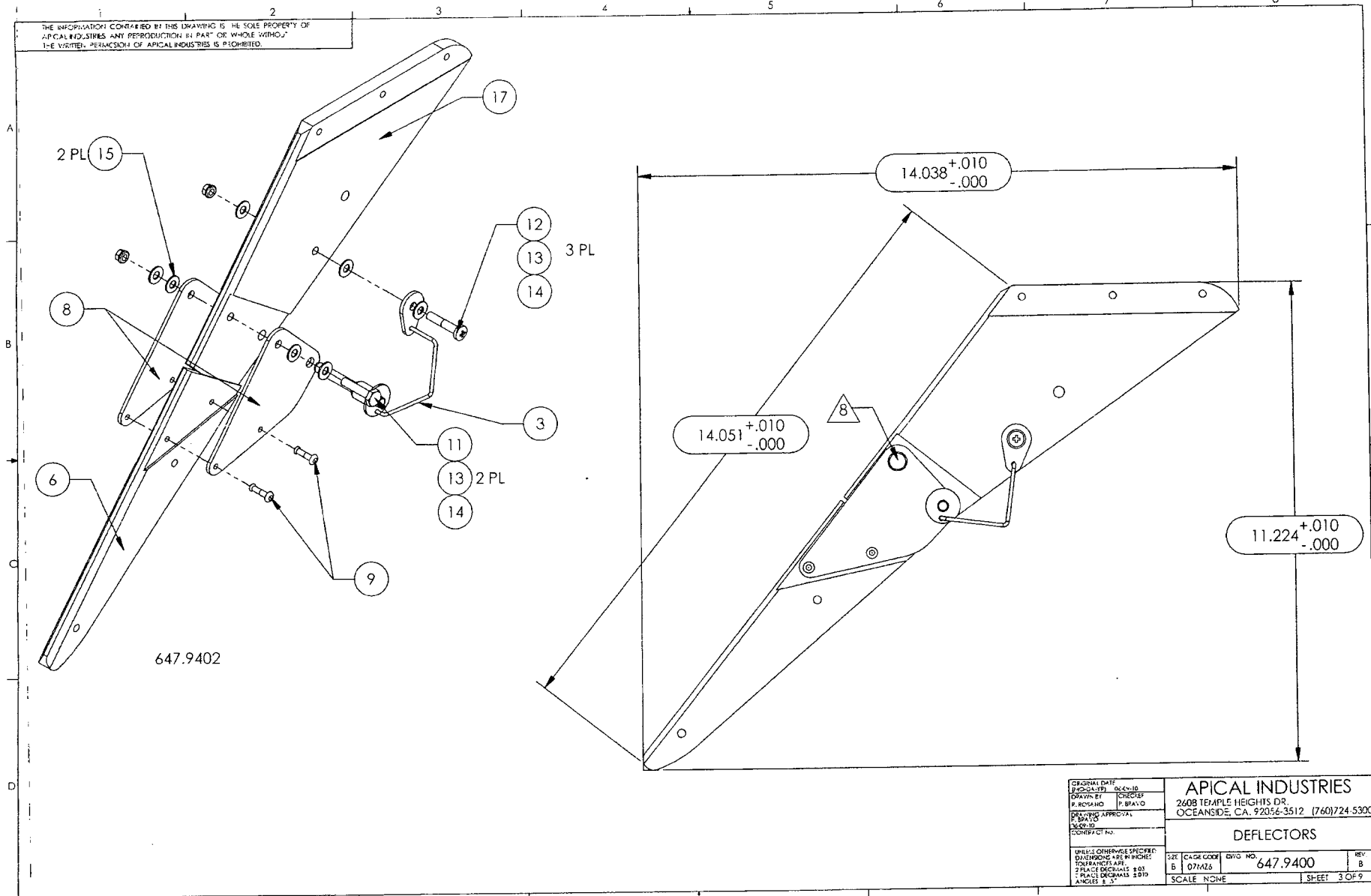
SPE B	CASE CODE 07MZ6	QTY NO. 647.9400	PR 1
SCALE NONE		SHEET 1 OF 1	

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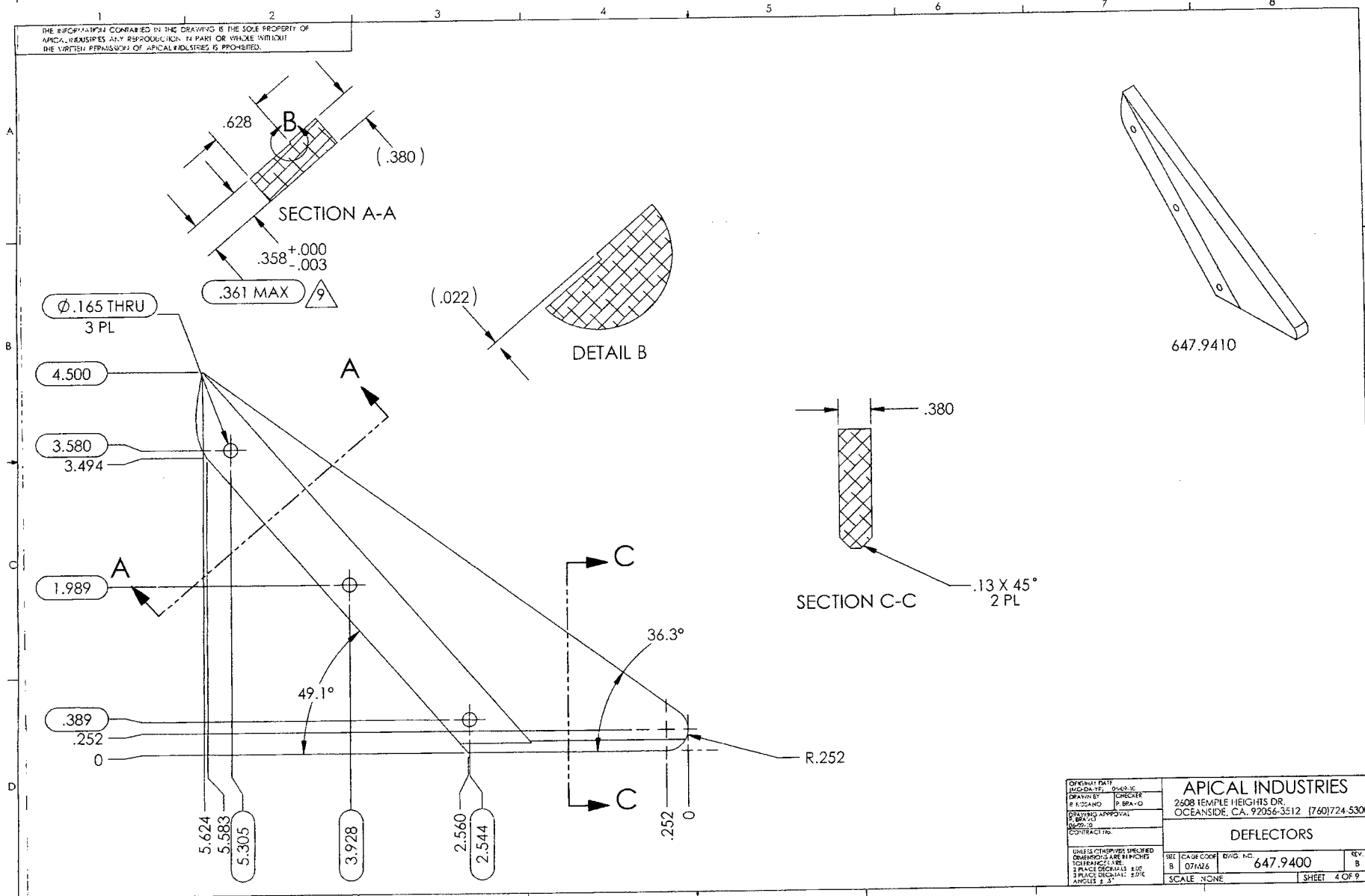
ORIGINAL DATE 06/20/10 06-20-10		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300		
DRAWN BY: R. B. F. / HNS	CHECKED: P. B. B. / YD			
DRAWING APPROVAL: P. B. B. / YD	DATE: 06-20-10			
CONFIRMED: 06-20-10				
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.03 3 PLACE DECIMALS ±.010 ANGLE: ±.5°		SEE: CA 24 CODE B 0/M/2	DWG NO: 647.9400	RE: B
		SCALE: NONE	SHEET	2 OF 9

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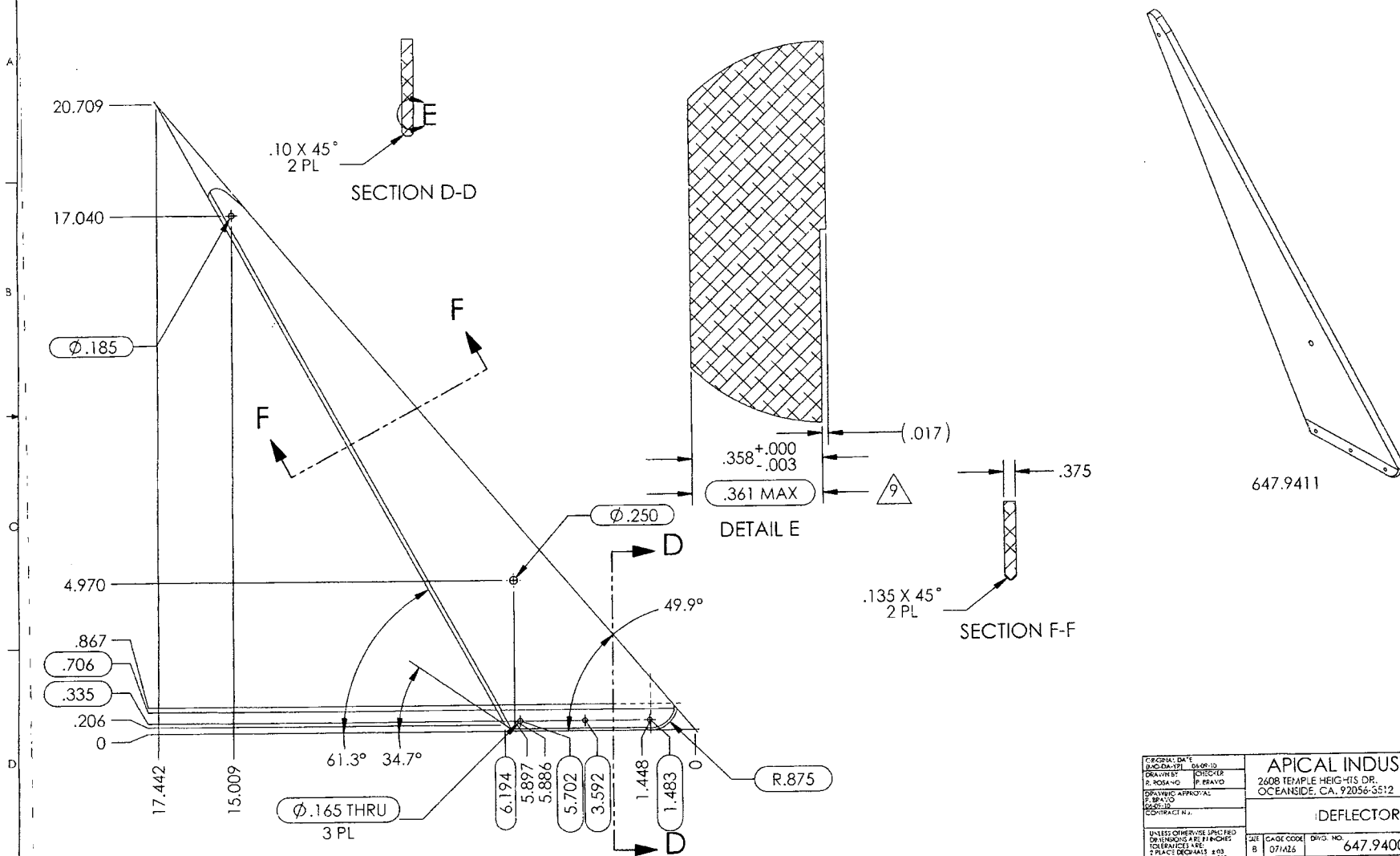
ORIGINAL DATE P. 02/04/10 DRAWN BY P. ROYAL CHECKED P. ROYAL DRAWING APPROVAL P. ROYAL 10/06/10 CONSTRUCTION NO.		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES ARE: 2 PLACE DECIMALS ±.01 3 PLACE DECIMALS ±.005 ANGLES ±.5°		SIZE B	CAGE CODE 071426
DIVISION NO. 647.9400		REV. B	SCALE NONE
SHEET 3 OF 9			

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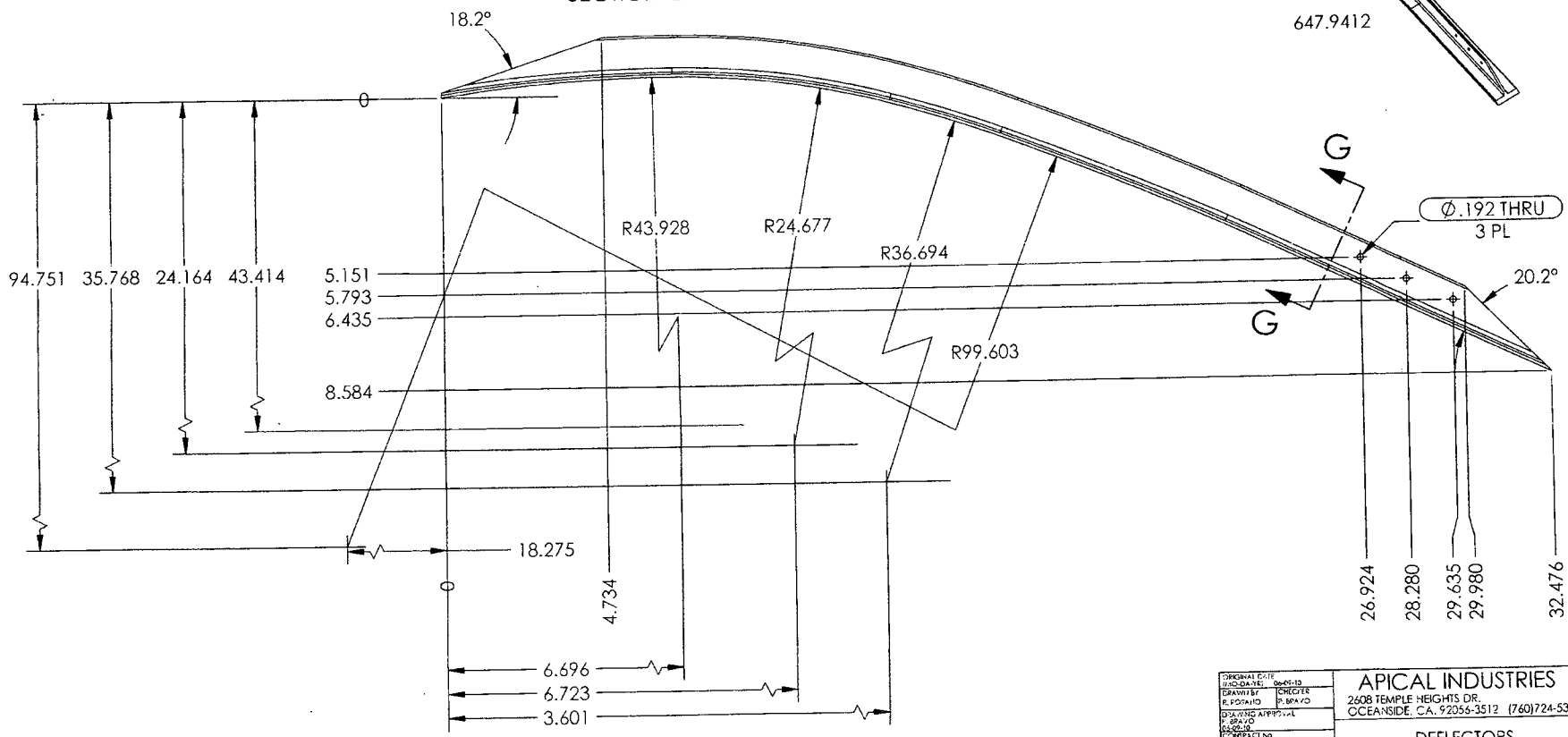
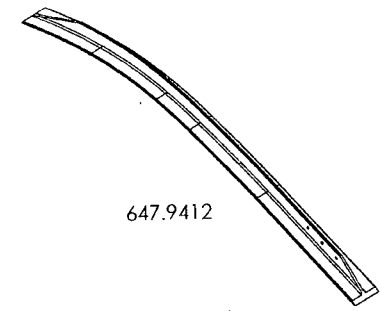
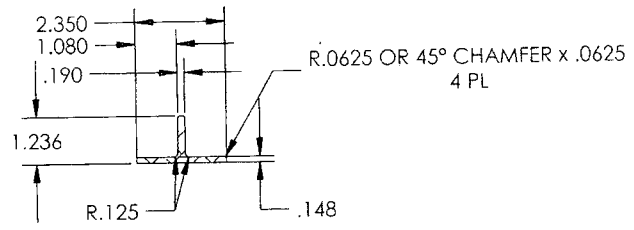
ORIGINAL DATE		05-02-10	
DRAWN BY	APICAL	CHECKED	APICAL
DATE	05-02-10	DATE	05-02-10
DESIGNED BY	APICAL	DESIGNED BY	APICAL
DATE	05-02-10	DATE	05-02-10
CONTRACT NO.			
UNLESS OTHERWISE SPECIFIED		DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:		FRACTIONS: 1/16, 1/8, 1/4, 1/2, 1, 2, 3, 4, 5, 6, 8, 10, 12, 16, 20, 24, 30, 36, 40, 48, 60, 72, 96, 120, 144, 180, 240, 360, 480, 720, 1440	
DECIMALS: 0.0005, 0.001, 0.002, 0.003, 0.005, 0.007, 0.010, 0.015, 0.020, 0.030, 0.040, 0.050, 0.060, 0.070, 0.080, 0.090, 0.100, 0.125, 0.150, 0.175, 0.200, 0.250, 0.300, 0.375, 0.500, 0.625, 0.750, 0.875, 1.000, 1.250, 1.500, 1.750, 2.000, 2.500, 3.000, 3.500, 4.000, 4.500, 5.000, 5.500, 6.000, 6.500, 7.000, 7.500, 8.000, 8.500, 9.000, 9.500, 10.000		ANGLES: 1°, 15°, 30°, 45°, 60°, 75°, 90°, 105°, 120°, 135°, 150°, 165°, 180°	
SHEET		DRAWING NO.	
B		647.9400	
REV.		B	

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DATE: 05/09/10 DRAWN BY: J. BEAVO CHECKED BY: J. BEAVO DRAWING APPROVAL: J. BEAVO CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 1 PLACE DECIMALS ±.03 2 PLACE DECIMALS ±.010 ANGLES ±.1°		SHEET: 5 OF 9 SCALE: NONE	DIV. NO.: 647.9400 REV: B

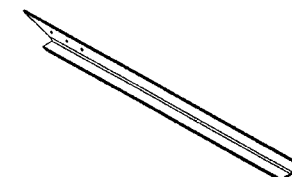
THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF APICAL INDUSTRIES. ANY REPRODUCTION IN PART OR WHOLE WITHOUT THE WRITTEN PERMISSION OF APICAL INDUSTRIES IS PROHIBITED.



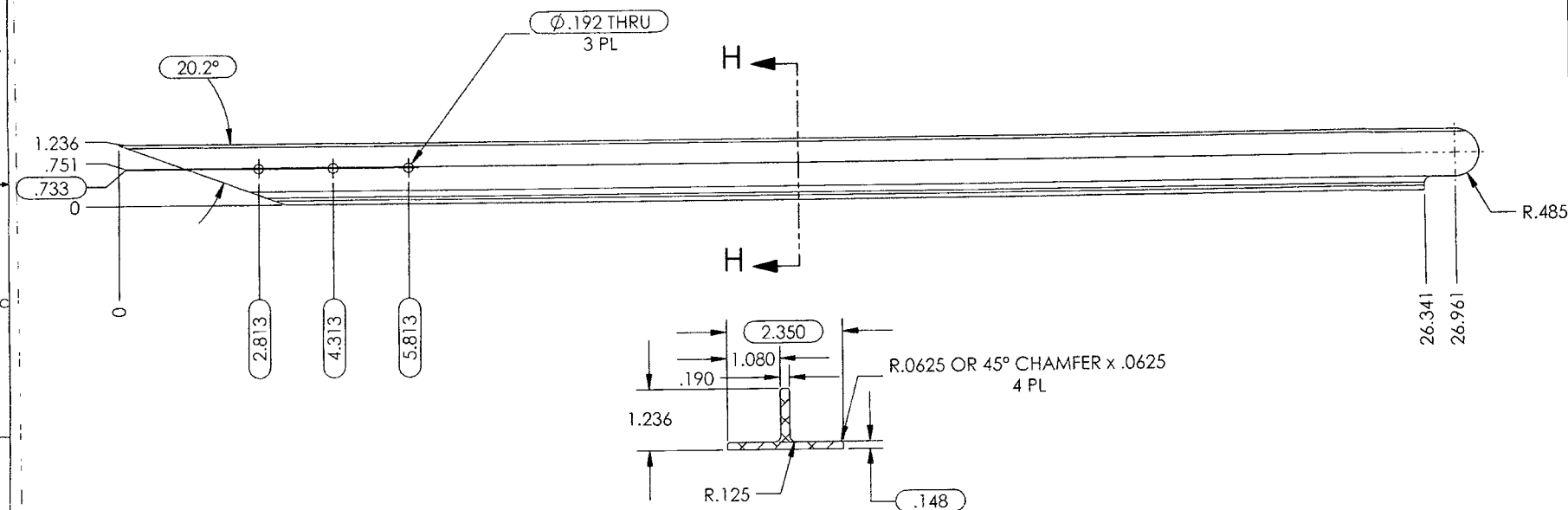
Ø.192 THRU
3 PL

ORIGINAL DATE: 06-05-10 DRAWN BY: J. SPAYO CHECKED BY: J. SPAYO DESIGNED BY: J. SPAYO APPROVED BY: J. SPAYO CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92056-3512 (760)724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FINISH SURFACES ±.010 OTHER SURFACES ±.020 ANGLES ±.5°		SHEET: 6 OF 9 SCALE: NONE DWG. NO.: 647.9400 CAGE CODE: 07M65 REV.: 8	DEFLECTORS

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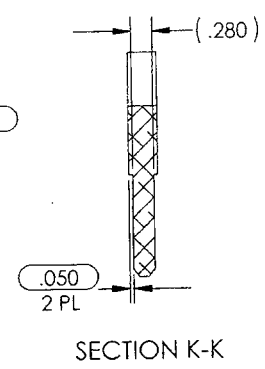
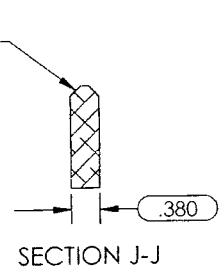
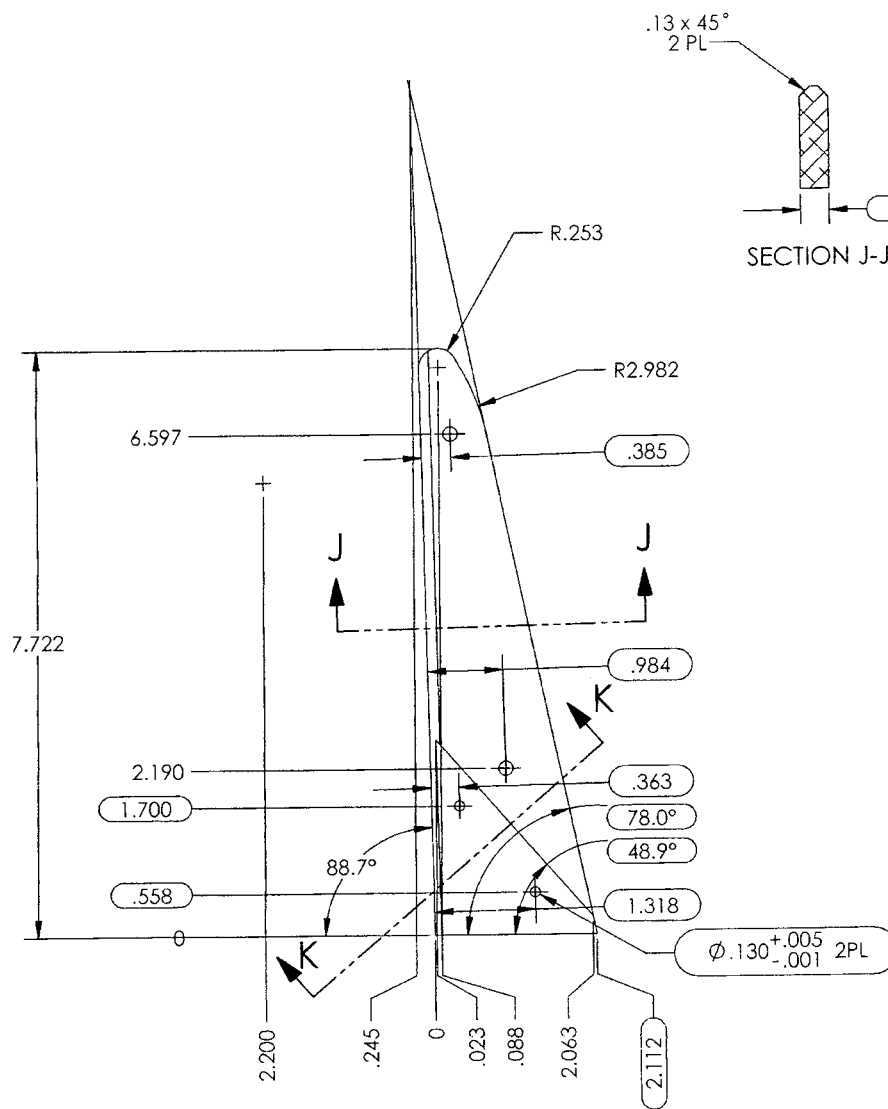
647.9413



SECTION H-H

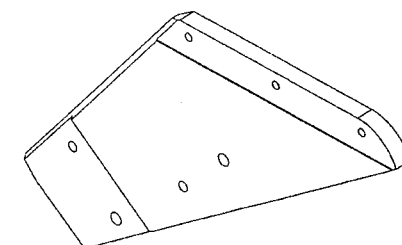
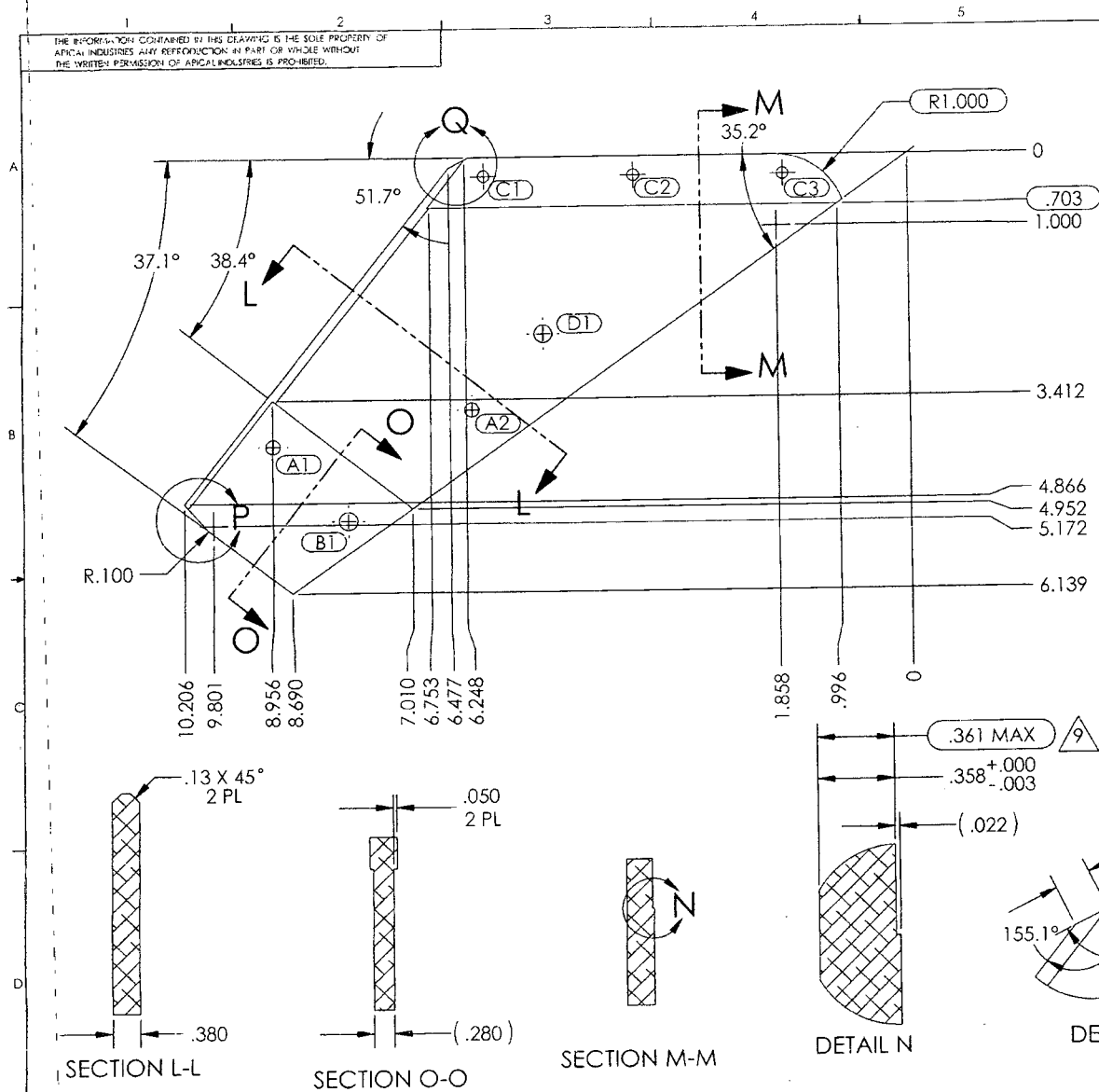
DRAWN: J. DATE: 05/08/16 CHECKED: J. DATE: 05/08/16 DESIGNED: J. DATE: 05/08/16 APPROVED: J. DATE: 05/08/16 CONTRACT NO.:	APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANSIDE, CA. 92055-3512 (760)724-5300
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS ARE 2 PLACE DECIMALS & 0.00 ANGLES & 3°	SHEET: 6 OF 6 DATE: 07/07/16 SCALE: NONE
DEFLECTORS	REV: 8 SHEET: 7 OF 9

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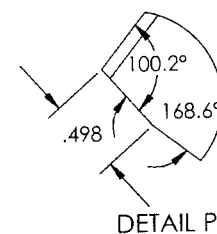


ORIGINAL DATE: 06-09-10		APICAL INDUSTRIES	
DRAWN BY: J. B. BAYNE		2608 TEMPLE HEIGHTS DR.	
CHECKED BY: J. B. BAYNE		OCEANSIDE, CA 92056-3512 (760)724-5300	
DRAWING APPROVED BY: J. B. BAYNE		DEFLECTORS	
DATE: 06-09-10		REV: B	
C. J. BAYNE		647.9400	
UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES		SCALE: NONE	
TOLERANCES ARE:		SHEET: 8 OF 9	
1 PLACE DECIMALS .1			
2 PLACE DECIMALS .01			
3 PLACE DECIMALS .001			
ANGLES: 1/2°			

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647.9415



TAG	X LOC	Y LOC	SIZE
A1	-8.949	-4.066	Ø .201
A2	-6.172	-3.562	Ø .201
B1	-7.903	-5.121	Ø .253
C1	-5.978	-.267	Ø .165
C2	-3.863	-.267	Ø .165
C3	-1.758	-.267	Ø .165
D1	-5.159	-2.500	Ø .250

ORIGINAL DATE: 08/20/10 DRAWN BY: R. ROSANO CHECKED BY: J. BEAVER DRAWING APPROVAL: [Signature] DESIGNED BY: [Signature] CONTRACT NO.:		APICAL INDUSTRIES 2608 TEMPLE HEIGHTS DR. OCEANS, DE, CA. 92056-3512 (760) 724-5300	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: 3 PLACE DECIMAL: .003 2 PLACE DECIMAL: .005 ANGLES: ± .5°		SHEET NO. 647.9400 SCALE: NONE	REV. B SHEET 9 OF 9

SECTION L-L

SECTION O-O

SECTION M-M

DETAIL N

DETAIL Q



A.T.G. Industries Inc.
731, rue Industrielle Rd.
PLATING DEPARTMENT
Rockland, On K4K 1T2
Canada
Ph: (613) 446-4544
Fax: (613) 446-4556

Pack List

Number: 63109

Date: 20-Jun-14

To

DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ship To


DART AEROSPACE LTD
1270 ABERDEEN ST.
HAWKESBURY, ON K6A 1K7
Canada

Ph: 613-632-5200

Fax: 613-632-1185

Ph: 613-632-5200

Fax: 613-632-1185

Terms		Ship Via	
Quantity		Description	
1 lot	Part: ASST	Rev:	
	12 PCS 646.9710 (14.50)		
	5 PCS 649.8310 (14.50)		
	6 PCS 646.9811 (32.60)		
	4 PCS 647.9412 (31.60)		
	4 PCS 649.5312 (10.70)		
	4 PCS 649.5310 (11.45)		
	HARD ANODIZE BLACK		
	MIL-A-8625 TYPE III CLASS 2		
	PRIME MIL-P-23377J TYPE I CLASS N		
	PRICE IS PER PIECE		
	Job: 20140381	PO: 24541	Line:
Certificate of Conformance			
A.T.G. Industries certifies that all items in this shipment are in conformance with all requirements, specifications and drawings referenced in the purchase order.			
ISO 9001 : 2008 REGISTERED ATG SALES-2010 TERMS APPLY			
DATE: 20/6/14			
CERTIFIED SIGNATURE: 			
RECEIVER SIGNATURE: _____			